

147 atgtcggactacgagaacgatgacgagtgctggaacgtcctggag CARD domain
M S D Y E N D D E C W N V L E
192 ggcttccgggtgacgctcacctcggtcatcgacctcagcgc
G F R V T L T S V I D P S R I
237 acaccttacctgctgagtgcaaggctcctgaacctgatgatgag
T P Y L R Q C K V L N P D D E
282 gagcaggtgctcagcgaccccaacctggtcatccgcaaacggaaa
E Q V L S D P N L V I R K R K
327 gtgggtgctcctggacatcctgcagcggaccggccacaagggc
V G V L L D I L Q R T G H K G
372 tacgtggccttcctcgagagcctggagctctactaccgcagctg
Y V A F L E S L E L Y Y P Q L
417 tacaagaaggtcacaggcaaggagccggcccgctcttctccatg
Y K K V T G K E P A R V F S M
462 atcatcgacgcgtccggggagtcaggcctgactcagctgctgatg
I I D A S G E S G L T Q L L M
507 actgaggtcatgaagctgcagaagaaggtgcaggacctgaccgcg
T E V M K L Q K K V Q D L T A
552 ctgctgagctccaaagatgacttcatcaaggagctgcgggtgaag
L L S S K D D F I K E L R V K
597 gacagcctgctgcgcaagcaccaggagcgtgtgcagaggctcaag FILAMENT domain
D S L L R K H Q E R V Q R L K
642 gaggagtgagcggcggcagcccgagctcaagcgtgcaaggag
E E C E A G S R E L K R C K E
687 gagaactacgacctggccatgctgctggcgaccagagtgaggag
E N Y D L A M R L A H Q S E E
732 aaggcgccgctcatgctggaacgtgacctgcagctggagatt
K G A A L M R N R D L Q L E I
777 gaccagctcaagcacagcctcatgaaggccgaggacgactgcaag
D Q L K H S L M K A E D D C K
822 gtggagcgcaagcacacgctgaagctcaggcacgccatggagcag
V E R K H T L K L R H A M E Q
867 cggcccgagcaggagctgctgtgggagctgcagcaggagaaggcc
R P S Q E L L W E L Q Q E K A
912 ctgctccaggcccggtgcaggagctggaggcctcgtccaggag
L L Q A R V Q E L E A S V Q E
957 gggagctggacaggagcagcccctacatccaggtactggaggag
G K L D R S S P Y I Q V L E E
1002 gactggcgccgagcgtgcgggaccaccaggagcaggccaacac
D W R Q A L R D H Q E Q A N T
1047 atcttctcctgctgcaaggacctccgcccaggcgaggcccgacgc
I F S L R K D L R Q G E A R R
1092 ctccggtgcatggaggagaaggagatgttcgagctgcagtgctg
L R C M E E K E M F E L Q C L
1137 gactacgtgaaggactccaagatgtacaaggaccgcatcgaggcc
A L R K D S K M Y K D R I E A
1182 atcctgctgcagatggaggaggtcgccattgagcgggaccagagc
I L L Q M E E V A I E R D Q S
1227 acacaaatggaggggctgtga 1247
T Q M E G L *

FIGURE 1

1 atggatgactacatggagacgctgaaggatgaagaggacgccttg CARD domain
M D D Y M E T L K D E E D A L
46 tgggagaatgtggaagtgaaccggcacatgctcagcccttatatc
W E N V E C N R H M L S R Y I
91 aaccctgccaaqctcacgccctacctgcgtcaqtgtaaggtcatt
N P A K L T P Y L R Q C K V I
136 gatgagcaggatgaagatgaagtgcttaatgcccttatgctgcca
D E Q D E D E V L N A P M L P
181 tccaagatcaaccgagcagccgctgttgacattctacataacc
S K I N R A G R L L D I L H T
226 aaggggcaaaagggcttatgtggtcttcttgagagcctagaattt
K G Q R G Y V V F L E S L E F
271 tattaaccagaactgtacaaaactggtgactgggaaagagccact
Y Y P E L Y K L V T G K E P T
316 cggagattctccaccattgtggtggaggaaggccacgaggcctc
R R F S T I V V E E G H E G L
361 acgcacttctgatgaacgaggtcatcaagctgcagcagcagatg
T H F L M N E V I K L Q Q Q M ERM (ezrin) domain
406 aaqgccaaggacctgcaacgctgcgagctgctgcccaggttgcgg
K A K D L Q R C E L L A R L R
451 cagctggagatgaagaagaacagatgacgctgacgcgctggaag
Q L E D E K K Q M T L T R V E
496 ctgctaaccctccaggagcgtactacaagatgaaggaagagcgg
L L T F O E R Y Y K M K E E R
541 gacagctacaatgacgagctggtcaagtgaaagcagcacaactac
D S Y N D E L V K V K D D N Y
586 aacttaagcatgctgctacgcacagctcagtgaggaagaacatg
N L A M R Y A Q L S E E K N M
631 ccggtcatgaggaagcggagacctccaactcgaatcgatcagcta
A V M R S R D L Q L E I D Q L
676 aagcaccggttgaataagatggaggaagaaatgtaagctggagaga
K H R L N K M E E E C K L E R
721 aatcagctctctaaaactgaagaatgacattgaaaatcggcccaag
N Q S L K L K N D I E N R P K
766 aaggaqcaaggttctggaactggagcgggagaatgaaatgctgaaq
K E Q V L E L E R E N E M L K
811 accaaaaaccaggaqctgcaqtccatcatccagggcgggaagcgc
T K N Q E L Q S I I Q A G K R
856 agcctgccagactcagacaaggccatcctggacatcttgaacac
S L P D S D K A I L D I L E H
901 gaccgcaaggaagccctggaggaagcaggaqctggtcaacagg
D R K E A L E D R Q E L V N R
946 atctacaacctgcaggaaggaagcccgccaggaaggaqctgcga
I Y N L Q E E A R Q A E E L R
991 gacaagtacctggaggaaggaaggaagcctggagctcaagtgctcg
D K Y L E E K E D L E L K C S
1036 accctgggaaaggaactgtgaaatgtacaagcaccgcatgaacacg
T L G K D C E M Y K H R M N T
1081 gtcatgctgcagctggaggaaggtggagcgggagcgggaccagga
V M L Q L E E V E R E R D Q G

FIGURE 2A

1126 caggctgtggccttccaggacactgcacaaagctctcaacaca
Q A V A F Q G H C I K A L N T

1171 gagcctgccactagcaagggctcggaccatcggtctgtgacccg
E P A T S K G R T I G S V I A

1216 ttaatgaaagggccttccactcccgagatgaaqctcagacacag
L M K K A F H S R D E A Q T Q

1261 tactcgcaqtgcttaatcgaaaaggacaaqtacaggaagcagatc
Y S Q C L I E K D K Y R K Q I

1306 cgcgagctggaggaagaaacgacgagatgaggtcagatgggtg
R E L E E K N D E M R I E M V

1351 cggcgaggaggcctgcacgtcaacctggagagcaagctgcggcgc
R R E A C I V N L E S K L R R

1396 ctctccaaggacagcaacaacctggaccagagtctgccaggaac
L S K D S N N L D Q S L P R N

1441 ctgccagtaaccatcatctctcaggactttggggatgccagcccc
L P V T I I S Q D F G D A S P

1486 aggaccaatgggtcaagaagctgacgattcttccacctcggaggag
R T N G Q E A D D S S T S E E

1531 tcacctgaagacagcaagtacttctgcctaccatccgccccag
S P E D S K Y F L P Y H P P Q

1576 cgcaggatgaacctgaaggcctccagctgcagagagccaaatcc
R R M N L K G I Q L Q R A K S

1621 cccatcagcctgaagcgaacatcagattttcaagccaagggcac
P I S L K R T S D F Q A K G H

1666 gaggaagaaggcagcgacgcccagccctagctcctgcggatctctg
E E E G T D A S P S S C G S L

1711 cccatcaccaactccttcaccaagatgcccccccgagccgcagc
P I T N S F T K M P P R S R S

1756 agcatcatgtcaatcaccgcgagcccccggaacgactccatc
S I M S I T A E P P G N D S I

1801 gtcagacgtctacaaggagcgcgccccatcgagcacagtcgaa
V R R Y K E D A P H R S T V E

1846 gaagacaatgacagcggcggtttgacgccttagatctggatgag
E D N D S G G F D A L D L D E

1891 ctggcagcaggggagactgtggctcagagtcctccaggtgtgcc
L A A G E T V A Q S P P G V P

1936 tgccagccccctctcttccagggtccccagcctttgcccagcta
C Q P P L F Q G S P S L C Q L

1981 aggctgccaacgatgaaacgaaagatgagtggtcctccttaatg
R L P T D E T K D E W S S L M

2026 gggaagcatcagcgtaccgaagtgttaagagagatgacagtcac
G K H Q R Y Q V L K R D D S H

2071 gaacgctactccttcggaccctcctccatccactcctcctcctc
E R Y S F G P S S I H S S S S

2116 tcccaccaatccgagggcctggatgcctacgacctggagcaggtc
S H Q S E G L D A Y D L E Q V

2161 aacctcatgttcaggaaqttctctctggaagacccttccggcct PDZ domain
N L M F R K F S L E R P F R P

2206 tcggtcacctctgtgqggcacgtgcgqggcccaaggccctcggtg
S V T S V G H V R G P G P S V

2251 caqcacacgacgctgaatggcgacagcctcacctcccagctcacc
Q H T T L N G D S L T S Q L T

2296 ctgctggggggcaacgcgcgagggagcttctgacactcggtcagg
L L G G N A R G S F V H S V K

2341 cctggctctctgtgcccgaagaaagcccgccctcctgagggccaccag
P G S L A E K A G L R E G H Q

2386 ctgctgctgctagaagcctgcacccgagggcgaagggcagagtgctc
L L L L E G C I R G E R Q S V

2431 ccgttgacacatgcaccaaagaaagcccactggaccatccag
P L D T C T K E E A H W T I Q

2476 aggtgcagcggcccgctcacgctgcactacaaggtcaaccacgaa
R C S G P V T L H Y K V N H E

2521 gcccagcagaaaaatccgtgggcctgcagaatatgatgtgggcagc

FIGURE 2B

A Q Q K I R G P A E Y D V G S
2566 acctccaaagcccgagctgcgcagcagcacagccctgcaagtct
T S K A R S C A A A Q P C K S
2611 ggaattccagggaagaaagttcattccggcaggggtaccggaag
G I P G K E S S F R Q G Y R K
2656 ctggtgaaggacatggaggacggcctgatcacatcgggggactcg
L V K D M E D G L I T S G D S
2701 ttctacatccggctgaacctgaacatctccagccagctggacgcc
F Y I R L N L N I S S Q L D A
2746 tgcaccatgtccctgaagtgtgacgatgttggtgcacgtccgtgac
C T M S L K C D D V V H V R D
2791 accatgtaccaggacaggcacgagtggtgtgctgcgcgggtcgac
T M Y Q D R H E W L C A R V D
2836 cctttcacagaccatgacctggatattggcaccatacccagctac
P F T D H D L D M G T I P S Y
2881 agccgagcccgagcagctcctcctggtgaaactgcagcgcctgatg
S R A Q Q L L L V K L Q R L M
2926 caccgaggcagccgggaggaggtagacggcaccacacacacctg
H R G S R E E V D G T H H T L
2971 cgggcactccggttcgtcagcaggtccgagaacaagtataagcgg
R A L R F V S R S E N K Y K R
3016 atgaacagcaacgagcgggtccgcacatctcggggagtccgcta
M N S N E R V R I I S G S P L
3061 gggagcctggcccggtcctcgtggacgccaccaagctcttgact
G S L A R S S L D A T K L L T
3106 gagaagcaggaagagctggaccctgagagcgagctgggcaagaac
E K Q E E L D P E S E L G K N
3151 ctcagcctcatccctacagcctggtacgcgccttctactgcgag
L S L I P Y S L V R A F Y C E
3196 cgccgcccggcgtgctcttcacaccacgtgctggccaagacg
R R R P V L F T P T V L A K T
3241 ctggtgcagaggctgctcaactcgggaggtgccatggagtccacc
L V Q R L L N S G G A M E F T
3286 atctgcaagtcagatatcgtcacaagagatgagttcctcagaagg
I C K S D I V T R D E F L R R
3331 cagaagacggagaccatcatctactcccagagaagaaccccaac
Q K T E T I I Y S R E K N P N
3376 gcgttcgaatgcatcgcccctgccaacattgaagctgtggccgcc
A F E C I A P A N I E A V A A
3421 aagaacaagcactgcctgctggaggctgggatcggtgcacaaga
K N K H C L L E A G I G C T R
3466 gacttgatcaagtccaacatctaccccatcgtgctcttcatccgg
D L I K S N I Y P I V L F I R
3511 gtgtgtgagaagaacatcaagaggttcagaaagctgctgccccga
V C E K N I K R F R K L L P R
3556 cctgagacggaggaggagttcctgcgcgtgtgccggctgaaggag
P E T E E E F L R V C R L K E
3601 aaggagctggaggccctgcgcgtgctgtacgccacgggtggaacct
K E L E A L P C L Y A T V E P
3646 gacatgtggggcagcgtagaggagctgctccgcttgtaaggac
D M W G S V E E L L R V V K D
3691 aagatcgccgaggagcagcgcaagaccatctgggtggacaggac
K I G E E Q R K T I W V D E D
3736 cagctgtga 3744
Q L *

FIGURE 2C

1 atgggggaactgtgccgcagggactccgcactcacggcactggac
M G E L C R R D S A L T A L D
46 gaggagacactgtgggagatgatggagagccaccgccacaggatc
E E T L W E M M E S H R H R I CARD domain

91 gtacgctgcattctgccccagccgcctcacccccctacctgcgccag
V R C I C P S R L T P Y L R Q
136 gccaaaggtgctgtgccagctggacgaggaggaggtgctgcacagc
A K V L C Q L D E E E V L H S
181 ccccgctcaccaacagcgccatgcgggcccgggcacttgctggat
P R L T N S A M R A G H L L D
226 ttgctgaagactcgagggaagaacggggccatcgcccttcctggag
L L K T R G K N G A I A F L E
271 agcctgaagtccacaaccctgacgtctacaccctggtcaccggg
S L K F H N P D V Y T L V T G
316 ctgcagcctgatgttgacttcagtaactttagcggtgagagctcc
L Q P D V D F S N F S G E S S
361 gactttgacgggtttggcaggcacttctaggaacctcaggctcctg
D F D G L A G T S R N L R L L
406 gtaaccccagnn 417
V T P X

FIGURE 3

GI "10436238"

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1 msdyenddec wnvlegfrvt ltsvidpsr1 tpylrqckvl npddeeqvls dpnlvirkrk
61 vgvllldilqr tghkgyvafl eslelyypql ykkvtgkepa rvfsmiidas gesglqtqlm
121 tevmklqkkv qdltallssk ddfikelrvk dsllrkhqer vqrlkeecae gsrelkrcke
181 enydlamrla hqseekgaal mnrndlglei dqlkhsmlka eddckverkh tiklrhameq
241 rpsqellwel ggekallqar vqealeasvqe gkldrsspyi qvleedwrqa lrdhqeant
301 ifslrkdrlr gearrlrcme ekemfelqcl alrkdsmyk drieaillqm eevaierdqs
361 tqmegl

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GI "10436237"

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1 atcatcagga agtgcacagg cgtccggcgt gctcctccct ccctgcagcc ccgggagca
61 tctcccagag gctccggcgc ccaggctcct ggtgtgtctg cagtgcagggt ggctcctgga
121 agaccctcag cctgcctgct gaggccatgt cggactacga gaacgatgac gagtgtgga
181 acgtcctgga gggcttccgg gtgacgtca cctcggatcat cgaccctca cgcacacac
241 cttacctgag gacgtgcaag gtccgaacc ctgatgatga ggagcagggt ctcagcgacc
301 ccaacctggt catccgcaaa cggaaagtgg gtgtgtcctt ggacatcctg cagcggaccg
361 gccacaagg ctacgtggcc ttctcagaga gcttgagct ctactaccgg cagctgtaca
421 agaaggtcac aggcaaggag ccggcccgcg tcttctccat gatcatcgac gcgtccgggg
481 agtcaggcct gactcagctg ctgatgactg aggtcatgaa gctgcagaag aaggtgcagg
541 acctgaccgc gctgtgagc tccaaagatg acttcatcaa ggagctgcgg gtgaaggaca
601 gctgtgtgag caagcaccag gacgtgtgac agaggctcaa ggaggtgcgc gaggcggca
661 gccgcgagct caagcgtgac aaggaggaga actacgacct ggccatgcgc ctggcgacc
721 agagtgagga gaaggcgcc gcgctcatgc ggaaccgtga cctgcagctg gagattgacc
781 agctcaagca cagcctcatg aaggccgagg acgactgcaa ggtggagcgc aagcacacgc
841 tgaagctcag gcacgccatg gacgagcggc ccagccagga gctgctgtgg gagctgcagc
901 aggagaagg cctgtctcag gcccggtgac aggagctgga ggccctccgc caggaggga
961 agctggacag gacgagcccc tacatccagg tactggagga ggactggcgg caggcgctgc
1021 gggaccacca ggagcaggcc aacaccatct tctccctgag caaggacctc cgccaggcg
1081 agggccgagc cctccggtgc atggaggaga aggagatgtt cgagctgcag tgccctggac
1141 tacgtaagga ctccaagatg tacaaggacc gcatcgaggc catcctgctg cagatggagg
1201 aggtcgccat tgagcgggac cagagcacac aaatggaggg gctgtgacca gcctccgagc
1261 ccagcggtct gacgtcctcc ggagcctctg cttggagttg ggcgccgggg ccgaggggcc
1321 agggcaagct tggggccctc actgagggtc ggccctgtgc tgtcccgtca ggccatagcc
1381 acgcgggagg agctgcacgc acagcacgcc cggggcctgc aggagaagga cgcgctgcgc
1441 aagcaggtgc gggagctggg cgagaaggcg gatgagctgc agctgcagggt gttccagtgt
1501 gaggcgagc tactggcgtg ggagggcagg ctcaggcgcc agcagctgga gacgtcgtc
1561 ctgagctccg acctggaaga tggctcacc aggaggtccc aggagctctc actccccag
1621 gacctggagg acaccagct ctcagacaaa ggctgccttg ccggcggggg gagcccgaaa
1681 cagccctttg cagctctgca ccaggagcag gttttgcgga acccccatga cgcaggcctg
1741 agcagcgggg agcgcgccga gaaggagcgg cggcgccctc aagagagttt tgagaactac
1801 cgcaggaagc ggcacctcag gaagatgcag aaaggatggc ggagggggga ggaggaccgg
1861 gagaacacca cgggcagcga caacaccgac actgagggtc cctagccgca gcagacttcc
1921 ccgagcgctc gctgacttgg cctggaacga ggaatctggt gccctgaaag gccagccgg
1981 actgcccggc attggggccg tttgttaagc ggcaactcatt ttgaggaggc catgcccgtg
2041 ctcaccaccc ccatgcacac gccatctgtg taacttcagg atctgttctg tttaccatg
2101 taacacacaa tacatgcatg cattgtatta gtgttagaaa acacagctgc gtaaataaac
2161 agcacgggtg acccgc

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FIGURE 4

GI"9094656"

GAGAGGCTCCGCGGCCCCAGGCTCCTGGTGTGTCTGCAGTGCAGGTGGCTCCTGGAAGACC
CTCAGCCTGCCTGCTGAGGCCATGTTTGAAGTACGAGAACGATGACGAGTGCTGGAGCGTC
CTGGAGGGCTTCCGGGTGACGCTCACCTCGGTTCATCGACCCCTCACGCATCACACCTTAC
CTGCGGCAGTGCAAGGTCTGAACCCCGATGATGAGGAGCAGGTGCTCAGCGACCCCAAC
CTGGTCATCCGCAAACGGAAAGTGGGTGTGCTCCTGGACAT

GI"7132200"

GGGACAGCCTGCTCCGCAAGCACCAAGAGCGGGTGCAGAAGATGAGGGAGGAGAGGGACA
GTCTAAGCAAGGAGCTGCGGAAGTGCAAGGATGAGAACTACAACCTGGCAATGAGCTATG
CCAGACAGAGCGAGGAGAAGAGCAGTGCCCTCATGAAGAACAGGGACCTGCTCCTAGAGA
TTGATAGCTTGAAGCATAGCCTCATGAAGGTGAGGACGACTGCAAAGTACGAGCGTAAGC
ACTCGATGAAACTGAAGCATGCCATAGAACAACGTCCGAGCCATGAAGTGATGTGGGAGA
TCCAGCAGGAGAAGGAGCTGCTTTTGGCCAAGAATCAGGAGCTGGAGAACACTCTTCAGG
TTGCCAGGGAACAGAATTTGGAGACGAGTCTCTCCCATGAGACTGTGCAGAACTGACTGCA
GCCAGGTGCTGGAGCGCCAGGACCTGCTGAACACCCTGTACCACCTTCGCAAGGAGCTGC
GCCAAGCCGAGGTGCTTCGAGACAAGTTCGAGGAGTGCAGCTCAGCCCACGAGGAGCTGT
CCGAGAAGGAGCGGAGGAGGATGAAGGACTGCTTTGAGCGTTACCGCAGGAAGCGCGCCC
TGCGCAGAGCGCCCGCGGGCCCCGCCCGGAGGCCGACTGGGAGCCGAGCACGGGCAGC
GACAACACGGACACCGAGGGCAGCTAGGGGCCGGCCGAGCTTTCGAGTTTGCAGCTGGAT
CCGTCAATAAACAG

GI"5884878"

TGAACACCCTGTACCACCTTCGCAAGGAGCTGCGCCAAGCCGAGGTGCTCCGAGACAAGT
ATGCAGAGGAAAAAGAAATACTTGAAGTACAGTGCACATCTCTGAGGAAGGACTCCCAGA
TGTATAAAAAACGGATGGAAGCTGTCTTAGAGCAGATGGAGGAAGTGGCTTCGGAAAGAG
ACCAGGCACTGCTGACCAGAGAACAGTTCTACCCACAGTACTCCAAGAACCTTGTGAGA
GGGACACTTATCGGAAGCAGATTTCGGGAGCTGGGGGAGCGATGCGATGAGCTGCAGCTGC
AGCTCTTCCAAAAGGAGGGTCACTACTGGCTACTGAAGCCAAGCTGAAAAGACTGCAAC
TGGAGCTGCCTGCACTGACTTCTGACCTGGATGACACTCCTCCAGAGATCCCAGGTCTTA
CTCTCATGGTCATCTAGACGAAGATCGCACCTGACTAAAAAAGACGCTGTAAAGGAAAAC
CAGCAATCAGCATGCAAGAAACATCTGACGCAGATCACCCTTCGAGGATGCACTAACCA
CAAGACTTCGAGAAGACGGAGAGATAAGGATGCTTGAGCGTACGAGTCGGCCGATCCGCG
CCCCCCTCCGCGCTCCTTCCGTGGCTCGT

FIGURE 5

CARD11X ESTs

GI"6926669"

CACGAGGGAAATGTACAAGCACCGCATGAACACGGTCATGCTGCACCTGGAGGAGGTGGA
GCGGGAGCGGGACCAGGCCTTCCACTCCCGAGATGAAGCTCAGACACAGTACTCGCAGTG
CTTAATCGAAAAGGACAAGTACAGGAAGCAGATCCGCGAGCTGGAGGAGAAGAACGACGA
GATGAGGATCGAGATGGTGC GGCGGGAGGCCTGCATCGTCAACCTGGAGAGCAAGCTGCG
GCGCCTCTCCAAGGACAGCAACAACCTGGACCAGAGTCTGCCCAGGAACCTGCCAGTAAC
CATCATCTCTCAGGACTTTGGGGATGCCAGC

GI"6143407"

TTTTTTTTTTTTTTTTCTCTCCTGCCTCCTCTGGCCTTCGGACTCCTGCCCCGCGCCGCCCG
CAGCCCCCTCCCGGCCCTGCAGCCCCCTGGGCGGGCGGGCGCCCCCTCGGAGGACGGCTCCGG
GCCCCGGGGGACGGAGGGCCTGGTGCCTGGAGGAAGCCGGAGGCCTGCGTGGAGGAGGC
GCCCCGCGCAGCTGGCTGGCGGAGCATGAGCGCCCCAGATCCCAAGCACTGCAAGTCCAG
ATGCAACGGGAGCCTGGCTCAAGGGACGACAAGATCCAGCCGGAAGTGTAGAAGTCACA
CCCCAATGGCGGGATAGCAGCCCCCTGTGTGTGAGCACCCCTCCATGCCAGGAGGAGGGCC
AGAGATGGATGACTACATGGAGACCCTGAAGGATGAAGAGGACCCCTTGTGGGACAATGT
GGAGTGTAAACGGCACATGCTCAACCGCTATATCAACCCTGCCAAGCTCACGCCCTAC

GI"2785620"

GCAGCCCCCTCCCGGCCCTGCAGCCCCCTGGCGTGGGGCGCCATCGGAGGACGGCTCCGGG
CCCCGGGGGACGGAGGGCCTGGTGCCTGGAGGAAGCCGGACGCTGCGTGGAGGAGGCGC
CCCCGGTCTGGTCTGGCGGACGATGAGCGCCCCAGATCCCAAGCACTGCAAGTCCAGATG
CAACGGGAGCCTGGCTCAAGGGACGACAAGATCCAGCCGGAAGTGTAGAAGTCACACCC
CAATGGCGGGATAGCAGCCCCCTGTGTGTGATCACCCCTCCATGCCAGGAGGAGGGCCAGA
GATGGATGACTACATGGAGACGCTGAATGATGAAGAGGACGCCTTGTGGGAGAATGTGGA
GTGTAACCGGCACATGCTCAGCCGCTATATCAACCC

GI"1838222"

AAAAGGAGGAGGGCCAGAGATGGATGACTACATGGAGACGCTGAAGGATGAAGAGGACGC
CTTGTGGGTGAATGTGGAGTGTAAACCGGCACATGCTCAGCCGGGTCTCACGAATTCCGCT
GAGTTCTCACGAATTCCGCTGAGGTCTCACGAATTCCGCTGA

GI"6927709"

CACGACGACGGACGCCAGCCCTAGCTCCTGCGGATCTCTGCCCATCACCAACTCCTTCAC
CAAGATGCAGCCCCCGGAGCCGAGCAGCATCATGTCAATCACCGCCGAGCCCCCGGG
AAACGACTCCATCGTCAGACGCTACAAGGAGGACGCGCCCCATCGCAGCACAGTGAAGA
AGACAATGACAGCGGCGGGTTTGACGCCTTAGATCTGGATGATGACAGTCACGAACGCTA
CTCCTTCGGACCCCTCCTCCATCCACTCCTCCTCCTCCCACCAATCCGAGGGCCTGGA
TGCCTACGACCTGGAGCAGGTCAACCTCATGTTCAAGGAAGTTCTCTCTGGAAAGACCCTT
CCGGCCTTCGGTCACCTCTGTGGGGCACGTTCCGGGGCCCAAGGCCCTCGGTGCAGCAC

FIGURE 6A

GI"9720543"

TCATCCCCCTACAGCCTGGTACGCGCCTTCTACTGCGAGCGCCGCCGCCCGTGTCTTTCA
CACCCACCGTGTGGCCAAGACGCTGGTGCAGAGGCTGCTCAACTCGGGAGGTGCCATGG
AGTTTACCATCTGCAAGTCAGATATCGTCACAAGAGATGAGTTCCTCAGAAGGCAGAAGA
CGGAGACCATCATCTACTCCCGAGAGAAGAACCCCAACGCGTTCGAATGCATCGCCCCCTG
CCAACATCGAAGCTGTGGCCGCCAAGAACAAGCACTGCCTGCTGGAGGCTGGGATCGGCT
GCACAAGAGACTTGATCAAGTCCAACATCTACCCCATCGTGCTCTTCATCCGGGTGTGTG
AGAAGAACATCAAGAGGTTTCAAGAAAGCTGCTGCCCCGACCTGAGACGGAGGAGGAGTTCC
TGCGCGTGTGCCGGCTGAAGGAGAAGGAGCTGGAGGCCCTGCCGTGCCTGTACGCCACGG
TGGAACTTGACATGTGGGGCAGCGTAGAGGAGCTGCTCCGCGTTGTCAAGGACAAGATCG
GCGAGGAGCAGCGCAAGACCATCTGGGTGGACGAGGACCAGCTGTGAGGCGGGCGCCCTG
GGCAGAGAGA

GI"9142863"

TCATCCCCCTACAGCCTGGTACGCGCCTTCTACTGCGAGCGCCGCCGCCCGTGTCTTTCA
CACCCACCGTGTGGCCAAGACGCTGGTGCAGAGGCTGCTCAACTCGGGAGGTGCCATGG
AGTTTACCATCTGCAAGTCAGATATCGTCACAAGAGATGAGTTCCTCAGAAGGCAGAAGA
CGGAGACCATCATCTACTCCCGAGAGAAGAACCCCAACGCGTTCGAATGCATCGCCCCCTG
CCAACATCGAAGCTGTGGCCGCCAAGAACAAGCACTGCCTGCTGGAGGCTGGGATCGGCT
GCACAAGAGACTTGATCAAGTCCAACATCTACCCCATCGTGCTCTTCATCCGGGTGTGTG
AGAAGAACATCAAGAGGTTTCAAGAAAGCTGCTGCCCCGACCTGAGACGGAGGAGGAGTTCC
TGCGCGTGTGCCGGCTGAAGGAGAAGGAGCTGGAGGCCCTGCCGTGCCNTGGTACGCCA
CGGTGGAACCTGACATGTGGGGCAGCGTAGAGGAGCTGCTCCGCGTGTACAGACAGACGG
CGAGAGCAGCGCAAGA

GI"1761194"

GCTCCTTCAGTTCGTGAGCAGGTCCGAGAACAAGTATAAGCGGATGAACAGCAACGAGCG
GGTCCGATCATCTCGGGGAGTCCGCTAGGAGCCTGGCCCGGTCTCGCTGGACGCCACCA
AGCTCTTGACTGAGAAGCAGGAAGAGCTGGACCCTGAGAGCGAGCTGGGCAAGAACCTCA
GCCTCATCCCCCTACAGCCTGGTACGCGCCTTCTACTGCGAGCGCCGCCGCCCGTGTGCTCT
TCACACCCACCGTGTGGCCAAGACGCTGGTGCAGAGGCTGCTCAACTCGGGAGGTGCCA
TGGAGTTCACCATCTGCAAGTCAGATATCGTCACAAGAGATGAGTTCCTCAGAAGGCAGA
AGACGGAGACCATCATCTACTCCCGAGAGA

GI"8151878"

AGAGACTTGATCAAGTCCAACATCTACCCCATCGTGCTCTTCATCCGGGTGTGTGAGAAG
AACATCAAGAGGTTTCAAGAAAGCTGCTGCCCCGGCCTGAGACGGAGGAGGAGTTCTTGCGC
GTGTGCCGGCTGAAGGAGAAGGAGCTGGAGGCCCTGCCGTGCCTGTACGCCACGGTGGAA
CCTGACATGTGGGGCAGCGTAGAGGAGCTGCTCCGCGTTGTCAAGGACAAGATCGGCGAG
GAGCAGCGCAAGACCATCTGGGTGGACGAGGACCAGCTGTGAGGCGGGCGCCCTGGGCAG
AGAGACTCTGTGGCGCGGGGCATCTATGAGGCAGGCACCCTGGGCAGAGAGATGTAGTG
GGTGGGGGGGATCCTGTGGCCCCACAGAGCTGCCCCAGCAGACGCTCCGCCCCACCCGGT
GATGGAGCCCCGGGGGACAGTCGTGCCTGGGGAGGAGCAGGGTACAGCCCATTCCCCCA
GCCCTGGGTGACCTGGCCTAGCAGTTTTGGCCCTGCTGGCCTTAGCAGGGAGACAGGGGA
GCAAAGAACGCCAAGCCGGGAGGCCCAAGCCAGCCGGGCTCTCGAGGGGGGGCCCGTCC
CCATTTTGGCCCTTTATGAGC

FIGURE 6B

GI"2007639"

AAGAGACTTGATCAAGTCCAACATCTACCCCATCGTGCTCTNTCATCCGGGTGTGTGAGA
AGAACATCAAGAGGTTTCAGAAAGCNGCTGCCCCGGCCTGAGACGGAGGNGNAGTTCCTGC
GCGTGTGCCGGCTGAAGGNGAAGGAGCTGGAGGCCCTGCCGTGCCTGTACGCGACGGTGG
AACCTGACATGTGGGGCAGCGTAGAGGAGCTGCTCCGCGTTNTATAAGGACAAGATCGGT
GAGNAGCAGCGCAAGACCATCTNGGTAGACGAGGACCAGCTTT

GI"8042493"

GTGTACTGCCTTCTGAGGAACTCATCTCTGTGACGATATCTGACTTGCAGATGGTGA
CCATGGCACCTCCCGAGTTGAGCAGCCTCTGCACCAGCGTCTTGGCCAGCACGGTGGGTG
TGAAGAGCACGGGCCGCGCGCTCGCAGTAGAAGGCGCGTACCAGGCTGTAGGGGATGA
GGCTGAGGTTCTTGGCCAGCTCGCTCT

GI"2079290"

GACTTGATCAAGTCCAACATCTACCCCATCGTGCTCTTCATCCGGGTGTGTGAGAAGAAC
ATCAAGAGGTTTCAGAAAGCTGCTGCCCCGGCCTGAGACTGGAGGAGGAGTTCCTGCGCGT
GTGCCGGCTGAAGGAGAAGGAGCTGGAGGCCCTGCGATGCCTGTACGCCACGGTGGAACC
TGACATGTGGGG

GI"7044777"

GAAATAATAATACATTTTAATGCAAGAGAAATCATAGCCTGGTACACACCCCTTCCCCGA
TCTGTCCTGCCTGGGGATGTGTTTATGGTGAGTGTGTCCCCAGGACTGGTAGTCACCTGG
CTGTCCGGGTCCCCGCCCTACTGGCGGCAGCATGCCTGTCCCCAGCATTACATTCAACTG
CTGCTCTGGCTCTCGAGAGGCCGGCTGGCCTCNGGCCTTCCGGCTTGGCGTTCTTTGCTC
CCCTGTCTCCCTGCTAAGGCCAGCAGGGCCAAACTGCTAGGCCAGGTCAGCCAGGGCTGG
GGGAATGGGCTGTACCCTGCTCCTCCCCAGGCACGACTGTCCCCCGGGGCTCCATCACC
GGGTGGGGCGGAGCGTCTGCTGGGGCAGCTCTGTGGGCCACAGGATCCCCCGCAGCCAC
TGCATCTCTCTGCCCATGGTGCCTGCCTCATAGGATGCCCCGCGCCACAGAGTCTATATG
TCCAGGGCGCCCGCCTCACAGCTGGTCTCGTCCACCCAGATGGTCTTGCGCTGCTCCTC
GCCGATCTTGCTCTTGACATCGCGGAGCAGCTCCTTTACGCTGCCCCACATGTCAGGTGC
CCCCG

FIGURE 6C

CARD 12X EST

Pawlowski et al.
P-LJ 5100

GI"10316320"

TCATGCCCAGCTCCGTCCCACCCAGCAGCCCGCAGAGAAAGGAGGCAGCTGGCACCACAC
TGGGCTTTGGAGACACTGCGGGGACTGTGGACCCACCCTGCTGCACGGAGCTCCTGCAA
AAGCAAACCTGAGAACCTTGGGTCTCTCCAGCGCCCAGCCATGGGGGAACTGTCCCGCAG
GGACTCCGCACTCACGGCACTGGACGAGGAGACACTGTGGGAGATGATGGAGAGCCACCG
CCACAGGATCGTACGCTGCATCTGCCCCAGACGACATTAACCCCTATACTGTGACGCACA
GCGCCAGAGGCTGGCTGCTGACCATGGATGGACCGAGGAGGGAGGTTGCTGCACCAGCGC
CCACGAGACATCAACAACAGACGCACACTGCGGGGCCGGGCACATAGCGTGGCCTCGCGC
TAGAAAACATCAGAGGAGAAAGAAGCGGGGGCCCACTCGCACTCACCGTGAGTAGACGC
CATGCACAGTACCACCAAACCCATGAGCGCTACTACAACCCATGGGTCAACAGGGCATGA
CAGCCTGGATGCATAGACATAACAAGTAACCTTCTACTAGCCAGGTCCTCATGCGAAGACC
ATCCCAAGCCTGACCCGACATGCCCTGGACATGGGGGCCCACTACGCGCAGACCATGCAGC
GAGAGACGCATGACACCAGGCAACAACGCGGGCCACGAACGCGAGCGTTGCCTGCATCGA
CGGGCACGGTTGGCCACAGACACGGAATTGCAGCGGAGCCACACGTGGCAGCCCCCTGAGG
CCGACGACACCCCGGTGCACCGAAGGGGGCCATGGCAACCACGACCTGGCAGGCTTGACAC
ACCAAGCGCCATACCCACGCGCGTGAAAGGGTACAGAGGCACCAACTACCCAGTGCAAGCG
CAGTTCTTGCAAGGCGATGCCAAGGGAACGGCACGACATGACGACACCGCAGTACTCTGT
GAGGAAACCATCTTAGCAAGATGACAGCCTTGACAGGAAACAACGACACGAAGTGCCTGT
CTCGCAACGCATGACAGAAGACCTGTGCGATATAAAGTAAATGTGATACTAATAGAAAGC
AAGAAGGTTGACACTGAAAGACACACATATGAGTATAACTCGAGTATGCAACGTGAACAT
G

FIGURE 7